



## 1351.0.55.160 - Research Paper: Using State Space Models for Measuring Statistical Impacts of Survey Redesigns, A case study of the ABS Labour Force Survey, October 2017

Latest ISSUE Released at 11:30 AM (CANBERRA TIME) 21/03/2018 First Issue

## Summary

### Executive Summary

#### EXECUTIVE SUMMARY

The implementation of a major business transformation program in an official statistical agency is designed to achieve, among other things, improvements in data collection efficiency, data processing methodology and data quality. However, achieving such improvements can, in itself, induce statistical impacts which could be misinterpreted as real world change if they are not measured and handled appropriately.

This paper describes a range of statistical methods to measure the statistical impacts which may be encountered in future ABS Labour Force Survey (LFS) redesigns. State space modelling techniques have been utilised as the main approach to incorporate sampling error structure and time series intervention, and to take advantage of multiple data sources related to the LFS to improve impact measurement efficiency and accuracy.

## About this Release

The implementation of a major business transformation program in an official statistical agency is designed to achieve, among other things, improvements in data collection efficiency, data processing methodology and data quality. The improvements can also induce statistical impacts which could be misinterpreted as real world change if they are not measured and handled appropriately. This paper describes a range of statistical methods to measure the statistical impacts which may be encountered in future ABS Labour Force Survey (LFS) redesigns. State space modelling techniques have been utilised as the main approach to incorporate sampling error structure and time series intervention.